

AMENDMENTS TO THE CLAIMS:

Claims 1-10 (cancelled)

11. (Currently Amended) A method for assembling an integral electronic device, comprising:

in an opening that extends completely through a thickness of a first board, holding an electronic component; and

electrically connecting a second board to said electronic component ~~while said electronic component is held in said opening~~, thereby providing an integral electronic device including said first board, said electronic component and said second board.

12. (Previously Added) The method according to claim 11, wherein electrically connecting a second board to said electronic component comprises electrically connecting said second board to said electronic component via a flat metallic bump.

13. (Previously Added) The method according to claim 12, wherein electrically connecting said second board to said electronic component via a flat metallic bump comprises flattening a metallic bump that is on said second board and then connecting said metallic bump to said electronic component.

14. (Previously Added) The method according to claim 11, wherein holding an electronic component in an opening that extends completely through a thickness of a first board comprises holding a light-emitting element in said opening, with said opening being defined by a side wall that is capable of shielding light emitted from said light-emitting element.

15. (Previously Added) The method according to claim 14, wherein holding a light-emitting element in said opening comprises holding said light-emitting element in an opening of a board of any one of glass, ceramic and an organic resin.

16. (Previously Added) The method according to claim 15, wherein holding said light-emitting element in said opening comprises holding said light-emitting element in said opening via a photo-curing insulating resin.

17. (Previously Added) The method according to claim 14, wherein holding said light-emitting element in said opening comprises holding said light-emitting element in said opening via a photo-curing insulating resin.

18. (Previously Added) The method according to claim 11, wherein holding an electronic component in said opening comprises holding said electronic component in an opening of a board of any one of glass, ceramic and an organic resin.

19. (Previously Added) The method according to claim 18, wherein holding said electronic component in said opening comprises holding said electronic component in said opening via a photo-curing insulating resin.

20. (Previously Added) The method according to claim 11, wherein holding said electronic component in said opening comprises holding said electronic component in said opening via a photo-curing insulating resin.

21. (Previously Added) The method according to claim 11, wherein holding said electronic component in said opening comprises holding said electronic component in said opening via an insulating resin that surrounds said electronic component except for upper and lower surfaces of said electronic component.

22. (Previously Added) The method according to claim 21, wherein electrically connecting a second board to said electronic component comprises electrically connecting said second board to said upper surface of said electronic component, said method further comprising:

electrically connecting a third board to said lower surface of said electronic component.

23. (Previously Added) The method according to claim 11, further comprising: in another opening that extends completely through the thickness of said first board, holding another electronic component; and

electrically connecting said second board to said another electronic component while said another electronic component is held in said another opening,

wherein said opening and said another opening are parallel to one another.

24. (Previously Added) An integral electronic device comprising: a first board having an opening that extends completely through a thickness of said first board; an electronic component held within said opening; and a second board electrically connected to said electronic component.

25. (Previously Added) The integral electronic device according to claim 24, wherein said electronic component comprises a light-emitting element and said opening is defined by a side wall that is capable of shielding light emitted from said light-emitting element.

26. (Previously Added) The integral electronic device according to claim 25, wherein said first board comprises a board of any one of glass, ceramic and an organic resin.

27. (Previously Added) The integral electronic device according to claim 26, wherein said light-emitting element is held within said opening via a photo-curing insulating resin.

28. (Previously Added) The integral electronic device according to claim 25, wherein said light-emitting element is held within said opening via a photo-curing insulating resin.

29. (Previously Added) The integral electronic device according to claim 24, wherein said first board comprises a board of any one of glass, ceramic and an organic resin.

30. (Previously Added) The integral electronic device according to claim 29, wherein said electronic component is held within said opening via a photo-curing insulating resin.

31. (Previously Added) The integral electronic device according to claim 24, wherein said electronic component is held within said opening via a photo-curing insulating resin.

32. (Previously Added) The integral electronic device according to claim 24, wherein said second board is electrically connected to said electronic component via a flat metallic bump.

33. (Previously Added) The integral electronic device according to claim 24, wherein said electronic component is held within said opening via an insulating resin that surrounds said electronic component except for upper and lower surfaces of said electronic component.

34. (Previously Added) The integral electronic device according to claim 33, wherein said second board is electrically connected to said electronic component by being electrically connected to said upper surface of said electronic component, said integral electronic device further comprising:

a third board electrically connected to said lower surface of said electronic component.

35. (Previously Added) The integral electronic device according to claim 24, further comprising:

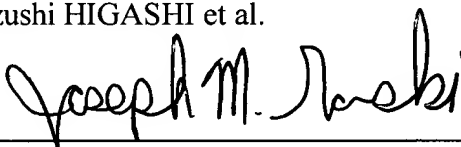
another electronic component held within another opening that extends completely through the thickness of said first board,

wherein said second board is electrically connected to said another electronic component, with said opening and said another opening being parallel to one another.

36. (New) The method according to claim 11, wherein electrically connecting a second board to said electronic component comprises electrically connecting a second board to said electronic component while said electronic component is held in said opening.

Respectfully submitted,

Kazushi HIGASHI et al.

By: 
Joseph M. Gorski
Registration No. 46,500
Attorney for Applicants

JMG/edg
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
October 29, 2003